

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/08305

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C07K16/18, C12N5/16, C12N15/13, A61K39/395, A61P31/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C07K1/00-C07K19/00, C12N1/00-C12N15/90, A61K39/395

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI/BIOSIS (DIALOG), GenBank/DDBJ/EMBL/GenSeq, SwissProt/PIR/GenSeq

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	N. ITOH et al., The Polypeptide Encoded by the cDNA for Human Cell Surface Antigen Fas Can Mediate Apoptosis. Cell, Vol.66, No.2, pages 233 to 243, 1991	1-7
X	WO 97/22361 A1 (Hidechika OKADA), 26 June, 1997 (26.06.97), Claims; examples & JP 9-227409 A & US 6190863 B1 & KR 2000-64360 A & CN 1205642 A & AU 719412 B	1-7
X	EP 510691 A1 (Osaka Bioscience Institute), 28 October, 1992 (28.10.92), Full text & JP 5-184368 A & US 5874546 A & CA 2067031 A	1-7

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 05 August, 2003 (05.08.03)	Date of mailing of the international search report 19 August, 2003 (19.08.03)
Name and mailing address of the ISA/ Japanese Patent Office	Authorized officer
Facsimile No.	Telephone No.

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## Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:

because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
(See extra sheet)

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Edited by Yoshihide TSUJIMOTO, "Saishin Apoptosis Jikkenho (Separate Volume Experimental Medicine, Bio Manual UP Series), 25 March, 1997 (25.03.97); pages 112 to 117	1-7
A	R. Klein et al., Expressed Human immunoglobulin $\kappa$ genes and their hypermutation. Eur. J. Immunol., Vol.23, pages 3248 to 3271, 1993; Full text	1-7
A	X. Wang and B.D. Stollar, Immunoglobulin VH Gene Expression in Human Aging. Clinical Immunology, Vol.93, No.2, pages 132 to 142, 1999; Full text	1-7
A	WO 00/18426 A1 (The Institute of Physical and Chemical Research), 06 April, 2000 (06.04.00), Full text & AU 9921851 A	1-7
A	TIA-1 "Cytotoxic cell" Marker, [on line], Beckman Coulter Kabushiki Kaisha, 1999 [retrieval date 01 August, 2003 (01.08.03)], Internet <URL:http://www.bc-cytometry.com/reagent/TIA-1.html>	1-7

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## Continuation of Box No.II of continuation of first sheet(1)

The technical matter common to claims 1, 2 and 6 resides in "a human antibody specifically recognizing HIV-infected cells and inducing apoptosis (hereinafter the antibody)".

As the results of the search, however, it is found out that the antibody is not novel because of having been disclosed in document 1 (N. Itoh, et al., The Polypeptide Encoded by the cDNA for Human Cell Surface Antigen Fas Can Mediate Apoptosis. Cell, Vol. 66, No. 2, pages 233 to 243, 1991), document 2 (WO 97/22361 A1 (Hidechika OKADA), 26 June, 1997 (26. 06. 97), claims, examples), document 3 (EP 510691 A1 (Osaka Bioscience Institute), 28 October, 1992 (28.10.92), full text) and document 4 (edited by Yoshihide TSUJIMOTO, Saishin Apoptosis Jikkenho (Experimental medicine, separate volume, Bio Manual UP Series), 25 March, 1997 (25.03.97), pages 112 to 117).

Consequently, the antibody falls within the category of prior art and, therefore, the common matter (the antibody) cannot be considered as a special technical feature in the meaning as described in the second sentence of PCT Rule 13.2.

Thus, there is no matter common to the above claims.

Since there is no other matter seemingly being a special technical feature in the meaning as described in the second sentence of PCT Rule 13.2, no technical relevancy in the meaning as described in PCT Rule 13 can be found out among these inventions differing from each other.

Such being the case, it is clear that claims 1, 2 and 6 do not fulfill the requirement of the unity of invention.